IN THE CLAIMS:

Claim 1 (Original): A protective cap (2) for a temperature measurement probe (30) of an infrared radiation thermometer (1) introducible into a body cavity (31), said cap being comprised of a base body (12) shaped to fit the body cavity (31) and having a window (15) transparent to infrared radiation,

characterized in that the base body (12) is provided with additional structures (13; 18, 20) at least in parts to improve heat insulation between the temperature measurement probe (30) and the body cavity (31).

Claim 2 (Original): The protective cap as claimed in claim 1, characterized in that the base body (12) is fabricated from plastic material and that the additional structures (13; 18, 20) are formed of soft, porous foamed plastic material (13).

Claim 3 (Original): The protective cap as claimed in claim 1, characterized in that the additional structures are formed o one of several air chambers (18, 20).

Claim 4 (Original): The protective cap as claimed in claim 3, characterized in that the air chamber(s) (are) formed by foamed plastic (13) having closed pores.

Claim 5 (Original): The protective cap as claimed in claim 3, characterized in that the air chamber(s) (18, 20) has (have) its (their) outside (s) close to the body cavity bounded by a flexible film.

Claim 6 (Original): The protective cap as claimed in claim 3, characterized in that the air chamber (s) (18, 20) has (have) its (their) outside (s) bounded by a flexible outer film fabricated from plastic, preferably polypropylene (PP) or polyethylene (PE).

Claim 7 (Original): The protective cap as claimed in claim 3, characterized in that the air chamber(s) (18, 20) is (are) subdivided by fin members (22, 23; 25).

Claim 8 (Original): The protective cap as claimed in claim 7, characterized in that the fin members (22, 23) are formed of foamed plastic material.

Claim 9 (Currently Amended): The protective cap as claimed in claim 2 [~~or 4~~], characterized in that the window is formed of a window film (15) transparent to infrared radiation.

Claim 10 (Original): The protective cap as claimed in claim 9, characterized in that the window film (15) is stretched tight in the area of the window by means of a holding device (26).

Claim 11 (Original): The protective cap as claimed in claim 10, characterized in that the holding device is formed by an annular body (26).

Claim 12 (Original): The protective cap as claimed in claim 11, characterized in that the clamping device (26) is clamped upon the end of the tubular base body (12) closed by the window.

Claim 13 (Original): The protective cap as claimed in claim 1, characterized in that the entire body base (12) is provided with thermally insulative means (13; 18, 20), and that the window is reduced to the thickness of an infrared transmitting film by hot pressing or hot stamping.

Claim 14 (Original): The protective cap as claimed in claim 1, characterized in that the base body (12) is formed of plastic material, preferably polyethylene (PE) or polypropylene (PP).

Claim 15 (Original): The protective cap as claimed in claim 2, characterized in that the thermally insulating foamed plastic (13) is preferably made of polyethylene (PE), polyvinyl or polyurethane (PU).

Claim 16 (Original): The protective cap as claimed in claim 1, characterized in that the base body (12) of the protective cap (2), prior to being applied to the temperature measurement probe (30), is not as yet shaped to fit the body cavity (31) and that it is made of a material that is expandable such as to be stretched to this particular shape only when being fitted over the temperature measurement probe (30).

Claim 17 (Original): A protective cap for a temperature measurement probe (30) of an infrared radiation thermometer (1) introducible into a body cavity (31), said cap being shaped to fit the body cavity (31) and having a window (15) transparent to infrared radiation, characterized in that the protective cap (2) is fabricated from a thermally insulating material and that a forming operation is used to bring the window (15) to the thickness transmissive to infrared radiation.

Claim 18 (Original): The protective cap as claimed in claim 17, characterized in that the forming operation is a hot pressing or hot stamping operation.

Claim 19 (New): The protective cap as claimed in claim 4, characterized in that the window is formed of a window film (15) transparent to infrared radiation.